adjusted life years (QALYs), and incremental cost-effectiveness ratio (ICER) was calculated. As Japanese Ministry of Health, Labour and Welfare has not yet approved abiraterone due to the delay in development, the drug cost was estimated based on prices in four other countries. In the present study, resource use was estimated using a Japanese claim data set with 2000 claim data of prostate cancer patients from January 2005 to March 2013. Both cost and outcomes were discounted at a 2% annual rate. **RESULTS:** The result of this study revealed that abiraterone plus prednisolone indicated higher QALYs than prednisolone alone. In the base-case analysis, ICER for abiraterone plus prednisolone exceeded JPY 17 million (roughly EUR 120,000) per QALY gained. One-way sensitivity analysis for the price of abiraterone influenced ICER (JYP 12.5 - 21 million). **CONCLUSIONS:** The present study suggested that the ICER is more than JPY 10 million. Further deliberate discussion on cost-effectiveness of abiraterone in Japan is needed to consider the Japanese price and clinical outcomes.

PCN104

USE OF PSA SLOPE TO GUIDE ADJUVANT RADIOTHERAPY IN POST-PROSTATECTOMY PROSTATE CANCER HAS POTENTIAL TO BE COST EFFECTIVE

Reed SD[1], Biehn Stewart S[2], Scales CD[2], Moul JW[2]

[1]*Duke Clinical Research Institute, Durham, NC, USA,* [2]*Duke University School of Medicine, Durham, NC, USA*

OBJECTIVES: NADiA ProsVue is a prognostic system developed to identify men at lower risk for clinical recurrence of prostate cancer following radical prostatectomy, as indicated by a prostate-specific antigen (PSA) slope <=2 pg/mL/month. We evaluated the potential cost-effectiveness of using the prognostic system to guide adjuvant radiotherapy (ART) in men considered to be at intermediate- or high-risk for recurrence based on the CAPRA-S nomogram. **METHODS:** We developed a decision analytic model consisting of a decision tree to stratify men into risk groups and a state transition model to generate long-term costs and outcomes. We derived model parameters using patient-level data from the product's 510(k) registration study, the medical literature and other sources. We conducted probabilistic, one-way and two-way sensitivity analyses to examine the cost-effectiveness of the system (i.e. with PSA slope findings) versus standard care (i.e. without PSA slope findings). **RESULTS:** The cost-effectiveness of a PSA slope-guided strategy varied widely due to small differences in QALYs at 10 years. Assuming that 20% of men in the intermediate-risk CAPRA-S group receive ART with standard care, the incremental cost-effectiveness ratio (ICER) is less than $50,000 per QALY when use of ART is less than 8.2% among men with PSA slopes <=2 pg/mL/month. Assuming that 40% in the high-risk CAPRA-S group receive ART with standard care, ART would have to decrease to at least 11.5% among men with PSA slopes <=2 pg/mL/month to achieve an ICER less $50,000 per QALY. ICERS were also sensitive to varying the costs of the prognostic system and ART, varying the benefits of salvage therapy and utility weights for ART toxicities. **CONCLUSIONS:** The ProsVue system has the potential to be cost effective, but its value will be dependent on the magnitude of reduction in ART among men identified as having a low risk of recurrence.

PCN105

COST-EFFECTIVENESS OF CETUXIMAB AS FIRST-LINE TREATMENT FOR METASTATIC COLORECTAL CANCER IN THE UNITED STATES

Ortendahl JD[1], Bentley TG[1], Anene AM[1], Purdum AG[2], Bolinder B[2]

[1]*Partnership for Health Analytic Research, LLC, Beverly HIlls, CA, USA,* [2]*Bristol-Myers Squibb, Plainsboro Township, NJ, USA*

OBJECTIVES: To evaluate the clinical and economic tradeoffs associated with FOLFIRI + either cetuximab or bevacizumab as 1st-line therapies among KRAS wild type (WT) metastatic colorectal cancer (mCRC) patients, through a cost-effectiveness analysis incorporating Phase III FIRE3 clinical trial data. **METHODS:** A deterministic cost-effectiveness model was developed to project lifetime survival and costs of FOLFIRI used with either cetuximab or bevacizumab. A cohort of 1st-line patients faced risks of adverse events, progression to 2nd-line treatment, or eligibility for curative liver resection. Clinical trial data, published literature, and publicly available databases were used to estimate model inputs. Incremental cost-effectiveness ratios (ICERs) were calculated as 2013 US$ per life year (LY) and per quality-adjusted life year (QALY). We conducted a scenario analysis to analyze the subset of RAS WT patients. The impact of parameter uncertainty was also evaluated with one-way and probabilistic sensitivity analyses. **RESULTS:** Compared with 1st-line bevacizumab KRAS WT patients, those treated with cetuximab gained an additional 5.7 months of life (42.9 vs. 37.2) at a cost of $46,301 ($280,933 vs. $234,632), for an ICER of $97,297/LY ($122,704/QALY). The benefits of cetuximab were also greater for RAS WT patients, for whom the ICER was $77,380/LY ($99,636/QALY). Treatment with cetuximab would be cost effective 53.6% of the time, given a willingness to pay threshold of $100,000/LY. Results were most sensitive to changes in 1st-line survival, treatment duration, and product acquisition costs. **CONCLUSIONS:** Treatment with cetuximab + FOLFIRI in 1st-line mCRC patients may improve health outcomes and use financial resources more efficiently than bevacizumab + FOLFIRI, given current societal standards. This information can be useful to clinicians, payers, and policy makers in making treatment and resource allocation decisions for KRAS WT and RAS WT mCRC patients.

PCN106

COST-EFFECTIVENESS OF PROPHYLACTIC USE OF FILGRASTIM IN ADULTS WITH ACUTE LEUKEMIA LYMPHOBLASTIC COLOMBIA

Casadiego EJ[1], Diaz Rojas JA[2], Bermudez C[3], Prieto-Martinez V[4], Urrego Novoa JR[5]

[1]*CENTRO DERMATOLOGICO, Colombia,* [2]*Universidad Nacional de Colombia, Bogota D,C., Colombia,* [3]*Instituto Nacional de Cancerología,* [4]*Universidad Nacional de Colombia, Bogotá, Colombia,* [5]*Facultad de Ciencias, Universidad Nacional de Colombia, Bogotá, Colombia*

OBJECTIVES: To determine the cost-effectiveness of prophylactic administration of Filgrastim compared with no use, during the induction phase of chemotherapy in adults with Acute Lymphoblastic Leukemia (ALL) in the Colombian context. **METHODS:** A decision tree with a time horizon of 30 days is built under the third-party payer perspective including only direct costs. The costs of procedures and medications were taken from official sources and an institution of national reference of oncology services. The safety and effectiveness data were taken from the literature and two Colombian cohorts (one retrospective and one prospective) with patients older than 15 years. The unit of outcome was the proportion of deaths averted. The incremental cost effectiveness ratio (ICER) was estimated, univariate sensitivity and probabilistic analysis were performed. **RESULTS:** Model results indicate that under the scenario of a clinical trial not using factor was a dominated alternative (ICER of - 61,753,681 COP per death averted). In contrast, using data from the Colombian cohorts, factor was dominated strategy (ICER of - 141,421,622 COP for retrospective cohort and prospective cohort -215,449,438 COP). The variable that most impacted the outcome was the incidence of febrile neutropenia (12% for the clinical trial, 60% retrospective cohort and 83% prospective cohort). The results were robust to the probabilistic sensitivity analysis. With the data from the clinical trial in 94% of cases using factor was cost effective, while in the Colombian data in 84% and 72% of cases (retrospective and prospective cohort respectively) was not cost effective to use factor. **CONCLUSIONS::** With Colombian information the prophylactic use of the factor under chemotherapeutic induction in adults with ALL turns out to be not cost-effective. The gap in the results suggests a careful extrapolation of information from clinical trials (ideal world) to develop economic evaluations in Colombia, and its impact on decision making.

PCN107

COST-EFFECTIVENESS OF FULL-FIELD DIGITAL MAMMOGRAPHY VERSUS SCREEN-FILM MAMMOGRAPHY IN BREAST CANCER SCREENING

Hipolito C, Gallegos V, Hernandez E

National Center for Health Technology Excellence, Mexico City, Mexico

OBJECTIVES: Analyze the cost-effectiveness of full-field digital mammography (DM) compared to the screen-film mammography (SFM) among different age groups of Mexican women. **METHODS:** A cost-effective study was developed - from the public sector perspective- to estimate the cost per cancer detected by DM vs. SFM in the following age groups: 40-49, 50-59 and 60-69 years old. Additional costs and effects were estimated by comparing DM against SFM and expressed as incremental cost-effectiveness ratio (ICER). The outcome was the number of detected cases. Staff wages and tests cost (mammography, ultrasound and biopsy) were included. An univariate sensitivity analysis was carried out with key variables. **RESULTS:** DM is more expensive and more effective than SFM for breast cancer detection. Using DM for 50-59 age group is not cost- effective since it detects fewer cases at a higher cost. In the 40-49 age group, the ICER for DM was $318,828 per additional case detected, while in the 60-69 the ICER for DM was $255,636. The ICER was sensitive to the lower cost of DM. **CONCLUSIONS:** For some age groups, DM is more effective than SFM; however, DM cost limits its use in a screening program. Evidence shows, SFM still has advantages in detecting breast cancer at an affordable cost. Further research taking into consideration social, organizational and staff training issues is important

PCN108

PARAMETER VALUES ASSOCIATED WITH THE DEVELOPMENT OF A GLOBAL ECONOMIC MODEL TO VALUE COMPANION DIAGNOSTICS IN ADVANCED/METASTATIC CANCER TREATMENT

Lachaine J, Mathurin K, Beauchemin C

University of Montreal, Montreal, QC, Canada

OBJECTIVES: Many targeted anticancer drugs under development will be used with a companion diagnostic. The objective of this study was to define parameter values that will be included in a global model estimating the cost-effectiveness of a companion diagnostic in advanced/metastatic cancer treatment. **METHODS:** As the model will be generic to allow its use in the most common cancers in Canada (breast, prostate, lung, colorectal, bladder, cervical, non-Hodgkin's lymphoma), specific parameters for each cancer of interest (including health state utilities and costs associated with cancer management) were considered. Consequently, a literature review was conducted using electronic databases from January 2000 until September 2013 to extract these parameters in economic models in advanced/metastatic cancer available. Cross-references studies and governmental publications were also consulted. Canadian costs and disutilities associated with any grade 3-4 treatment-related adverse events (AEs) were also obtained. **RESULTS:** Lung cancer was associated with the highest inpatient cost ($CAN19,875/stay of 9.9 days on average), while patients with prostate cancer incurred the highest cost associated with emergency visits ($CAN721.55/case). Costs associated with end-of-life care were similar among cancer types, with an average cost of $CAN31,081/case and 152 days of end-of-life care. Thirty-nine AEs were retrieved. Costs associated with management of AEs were up to $CAN71,967/case (development of secondary malign neoplasm), with an average cost of $CAN7,717/event. Disutilities associated with the incidence of AEs were up to 0.465 (hip fracture), with an average utility loss of 0.135. Lung cancer presented the worst health state utility values (0.611 in pre-progression and 0.441 in progression). **CONCLUSIONS:** Although the model structure and key elements required to assess the cost-effectiveness of a companion diagnostic can be generalized to different cancer types, this study suggests that parameter values should be specific to the cancer of interest.

PCN109

CAN NEXT GENERATION SEQUENCING SAVE LIVES AND PROVIDE A GOOD ECONOMIC VALUE IN COLON CANCER PREVENTION?

Gallego CJ[1], Shirts B[1], Garrison L[2], Jarvik G[1], Veenstra DL[3]

[1]*University of Washington, Seattle, WA, USA,* [2]*University of Washington School of Pharmacy, Seattle, WA, USA,* [3]*School of Pharmacy, University of Washington, Seattle, WA, USA*

OBJECTIVES: Screening of all patients diagnosed with colorectal cancer for Lynch syndrome using a staged testing procedure is currently recommended by Evaluation of Genomic Applications in Practice and Prevention (EGAPP) guidelines. Next generation sequencing (NGS) is a disruptive technology that likely offers improved outcomes, but its value is uncertain. The goal of this study was to evaluate the cost effectiveness of NGS vs. tumor tissue testing for universal testing of patients with colorectal cancer (CRC) to detect relatives with Lynch syndrome. **METHODS:**